

Appl. No. : 10/695,405  
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### AMENDMENTS TO THE CLAIMS

The listing of claims replaces all prior versions and listings of claims. Only those claims being amended herein show their changes in highlighted form, where insertions appear as underlined text (e.g., insertions) while deletions appear as strikethrough text (e.g., ~~deletions~~).

Claim 1. (Canceled).

Claim 2. (Currently Amended) A noninvasive physiological monitor comprising:

a noninvasive light source;

a magnetic field generator which imposes a magnetic field on tissue;

a polarimeter for detecting the polarization of the light source;

a noninvasive detector which generates an output responsive to light from said light source attenuated by said tissue and acted upon by said magnetic field; and

a processor responsive to said output to compensate a determination of values indicative of a blood constituent for light scattering within said tissue.

Claim 3. (Previously Presented) The noninvasive physiological monitor of Claim 2, wherein said values comprise concentration values of said blood constituent.

Claim 4. (Previously Presented) The noninvasive physiological monitor of Claim 2, wherein said blood constituent comprises glucose.

Claim 5. (Previously Presented) The noninvasive physiological monitor of Claim 2, wherein said processor compensates said determination of values by determining an indication of optical path length for said light from said light source.

Claim 6. (Previously Presented) The noninvasive physiological monitor of Claim 5, wherein said indication of said optical path length comprises mean optical path length estimates.

Claim 7. (Previously Presented) The noninvasive physiological monitor of Claim 2, comprising a polarimeter responsive to said light source and including said detector.

Claim 8. (Previously Presented) The noninvasive physiological monitor of Claim 7, wherein said polarimeter comprises a Faraday modulator.

Claim 9. (Previously Presented) The noninvasive physiological monitor of Claim 7, wherein said polarimeter comprises a photoelastic modulator.